

Application No.: 09/955,502
Amendment dated: March __, 2005
Reply to Office Action Dated: October 18, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Please cancel claims 7, 8, 9, 10 and 15.

1. (Currently Amended) A method of reducing superoxide damage to a eubacterial cell, comprising the step of vector-based expression of a YggX gene (SEQ ID NO:11) ~~or a gene encoding a YggX homolog~~, wherein the cells are rendered more resistant to superoxide damage and wherein there is no increased superoxide dismutase activity in the cells, wherein the lack of increase in superoxide dismutase activity is relative to cells not expressing the YggX gene, and ~~wherein the YggX homolog comprises the amino acid sequence motif defined by SEQ ID NO:1~~ wherein the vector-based expression is in a eubacterial cell.

2.-15. (Cancelled)

16. (New) A method of reducing superoxide damage to a eubacterial cell, comprising the step of vector-based expression of a gene encoding a YggX homolog, wherein the cells are rendered more resistant to superoxide damage and wherein there is no increased superoxide dismutase activity in the cells relative to cells not expressing the YggX homolog, wherein the YggX homolog comprises the amino acid sequence motif defined by SEQ ID NO:1 and wherein the vector-based expression is in a eubacterial cell.

17. (New) A method of reducing superoxide damage to a eubacterial cell, comprising the step of vector-based expression of a gene encoding a YggX homolog, wherein the cells are rendered more resistant to superoxide damage and wherein there is no increased superoxide dismutase activity in the cells relative to cells not expressing the YggX homolog, wherein the vector-based expression is in a eubacterial cell and wherein the YggX homolog is

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obtained from an organism selected from the group consisting of *S. typhimurium*, *S. typhi*, *E. coli*, *Y. pestis*, *H. influenza*, *S. putrefaciens*, *P. aeruginosa*, *P. putida*, *N. gonorrhoeae*, *T. ferrooxidans*, *B. bronciseptica* and *X. fastidiosa*.

18. (New) A method of reducing superoxide damage to a eubacterial cell, comprising the step of vector-based expression of a gene encoding a YggX homolog, wherein the cells are rendered more resistant to superoxide damage and wherein there is no increased superoxide dismutase activity in the cells relative to cells not expressing the YggX homolog, wherein the vector-based expression is in a eubacterial cell and wherein the YggX homolog is obtained from an organism selected from the group consisting of *B. pertussis*, *B. parapert*, *B. bronchi*, *A. actin*, *P. multocida*, *H. influenzae*, *H. ducreyi*, *S. putrefaciens*, *V. cholerae*, *E. coli*, 0157_H7EDL933, 0157_H7, *S. para*, *S. enteritidis*, *S. dublin*, StyphiCT18, *S. typhimurium*, *K. pneumo*, *Y. pestis*, *B. uchnera*, *X. fastidiosa*, *P. syring*, *P. putida*, *P. aeruginosa*, *N. gonorrhoeae*, *N. meningitB*, *N. meningitA*, *B. mallei*, *B. pseudomallei*, *T. ferrooxidans*, *M. capsulatus* and *C. burneti*.

19. (New) A method of increasing the resistance of an eubacterial enzyme having an oxygen labile Fe-S cluster/center to oxidative damage, comprising co-expressing the enzyme with YggX protein (SEQ ID NO.11) in a eubacterial cell, wherein the increased resistance is relative to cells not expressing the YggX protein.

20. (New) The method of claim 19 additionally comprising the step of examining the oxygen-labile enzyme to determine the amount of oxidative damage.

21. (New) A method of increasing the resistance of an eubacterial enzyme having an oxygen labile Fe-S cluster/center to oxidative damage, comprising co-expressing the enzyme with a homolog of the YggX protein in a eubacterial cell, wherein the increased resistance is relative to cells not expressing the YggX homolog, and wherein the homolog comprises the amino acid sequence motif defined by SEQ ID NO:1.

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22. (New) The method of claim 21 additionally comprising the step of examining the oxygen-labile enzyme to determine the amount of oxidative damage.

23. (New) A method of increasing the resistance of an eubacterial enzyme having an oxygen labile Fe-S cluster/center to oxidative damage, comprising co-expressing the enzyme with a homolog of the YggX protein in a eubacterial cell, wherein the increased resistance is relative to cells not expressing the YggX homolog, and wherein the homolog is obtained from an organism selected from the group consisting of *S. typhimurium*, *S. typhi*, *E. coli*, *Y. pestis*, *H. influenza*, *S. putrefaciens*, *P. aeruginosa*, *P. putida*, *N. gonorrhoeae*, *T. ferrooxidans*, *B. bronciseptica* and *X. fastidiosa*.

24. (New) The method of claim 23 additionally comprising the step of examining the oxygen-labile enzyme to determine the amount of oxidative damage.

25. (New) A method of increasing the resistance of an eubacterial enzyme having an oxygen labile Fe-S cluster/center to oxidative damage, comprising co-expressing the enzyme with a homolog of the YggX protein in a eubacterial cell, wherein the increased resistance is relative to cells not expressing the YggX homolog, and wherein the homolog is obtained from an organism selected from the group consisting of *B. pertussis*, *B. parapert*, *B. bronchi*, *A. actin*, *P. multocida*, *H. influenzae*, *H. ducreyi*, *S. putrefasciens*, *V. cholerae*, *E. coli*, 0157_H7EDL933, 0157_H7, *S. para*, *S. enteritidis*, *S. dublin*, StyphiCT18, *S. typhimurium*, *K. pneumo*, *Y. pesits*, *B. uchnera*, *X. fastidiosa*, *P. syring*, *P. putida*, *P. aeruginosa*, *N. gonorrhoeae*, *N. meningitB*, *N. meningitA*, *B. mallei*, *B. pseudomallei*, *T. ferrooxidans*, *M. capsulatus* and *C. burneti*.

26. (New) The method of claim 25 additionally comprising the step of examining the oxygen-labile enzyme to determine the amount of oxidative damage.